

KOSTECKA-MADALSKA, Olga; BANKOWSKI, Czeslaw; KUDUK, Janina

Attempted cultivation of eugenol-containing basil and the
eugenol content in its oil. Acta Pol. pharm. 21 no.4:
387-393 '64.

1. Z Katedry Botaniki Farmaceutycznej Akademii Medycznej
we Wroclawiu (Kierownik: doc. dr. Z. Chabudzinski).

BANKOWSKI, J.

Regarding the cleaning of steel structures. p.37

(OCHRONA PRACY; BEZPIECZENSTWO I HIGIENA PRACY, Vol. 10, No. 1, Jan. 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sept. 1957, Uncl.

POGORZESKA, Julitta; BANKOWSKI, Jacek

Equivalent rectangle for the product of rectangular
dispersion planes. Przegl elektroniki 4 no. 10/11:595
O-N '63.

1. Katedra Magnetykow i Dielektrykow, Politechnika,
Warszawa (for Pogorzaska). 2. Katedra Budowy
Maszyn Matematycznych, Politechnika, Warszawa
(for Bankowski).

BANKOWSKI, Jacek, Mgr. eng. (Ul. Karolkowa 58, Warszawa, Poland)

Drum store addressing systems and their influence on effective speed of operation of an electronic computer. Periodica polytechnica electr 7 no. 4:319-323 '63.

1. Department of Computer Design, Technical University, Warszawa.
Presented by Prof. Dr. L. Kozma.

POGORZELSKA, J.; BANKOWSKI, J.

Rectangle equivalent to the product of rectangular scatter areas. Archiw elektrotech 12 no. 4: 681-688 '63.

1. Katedra Magnetykow i Dielektrykow i Katedra Budowy Maszyn Matematycznych, Politechnika, Warszawa.

BANKOWSKI, J.

Effect of the way of arranging the addressing drum store on the effective operation speed of an electronic computer. Przem inst telekom prace 13 no.42/43:69-72 '63.

1. Department of Computer Design, Technical University, Warsaw.

BANKOWSKI, Jacek

Transferences in binary adding machines. Archiw automat 9
no. 1:97-111 '64.

1. Department of Computer Design, Technical University,
Warsaw.

BANKOWSKI, Jacek

The -1,1 number system. Archiw automat 10 no.1:53-69 '65.

1. Department of Computer Design of the Warsaw Technical University. Submitted November 10, 1964.

POLAND

BANKOWSKI, Jacek.

Computer Construction Department, Warsaw Polytechnic
(Katedra Budowy Maszyn Matematycznych Politechniki Warszawskiej)

Warsaw, Archiwum automatyki i telemekhaniki, No 3, July-September
1965, pp 375-390

"Redundant representations and high speed arithmetic in digital computers."

L 29460-66

ACC NR: AP6004523

SOURCE CODE: PO/0031/65/010/003/0375/0390

AUTHOR: Bankowski, J.--Ban'kovski, Ya.

ORG: Department of Computer Construction, Warsaw Polytechnical Institute (Katedra Budowy Maszyn Matematycznych Politechniki Warszawskiej)

TITLE: Redundant representations and operating speed in digital computers

SOURCE: Archiwum automatyki i telemechaniki, v. 10, no. 3, 1965, 375-390

TOPIC TAGS: ~~computer~~, computer logic, computer research, digital computer, *COMPUTER TECHNOLOGY, CODING*

ABSTRACT: The article discusses certain problems associated with increasing the performance speed in accomplishing fundamental arithmetic operations with a view to improving the organizational structure of the arithmetical units, and the method of performing these operations. The greatest achievement from the point of view of increased operating speed was the transistion from the series organization of the arithmo-meter to parallel organization. A number of properties of pseudo-systematic weight codes with base g are demonstrated, and addition algorithms are discussed in such codes. In the addition algorithm

Cord 1/2 4523

L 29460-66

ACC NR: AP6004523

explained here, if p_{i+1} is not a function of p_i there will not be carry propagation in the addition process. It is proven that the formation of such a function for p_{i+1} is always possible in the case discussed here. It is concluded that it is possible to build an adder without carry propagation also for redundant representations with base two (2). It appears that in practical applications decimal redundant representations will have the greatest importance and also, in spite of their low coding efficiency (50%), binary representations. It is shown that carry propagation can be eliminated in the addition process for $g \geq 2$ when information coding efficiency is greater than indicated in the studies published to date. Orig. art. has: 4 tables, 6 figures and 22 formulas.

SUB CODE:09 / SUBM DATE: 28Jan65/ ORIG REF: 007/ OTH REF: 012

Card 2/2 FV

ACC NR: AP6036345

SOURCE CODE: PO/0019/66/015/003/0659/0677

AUTHOR: Bankowski, J.

ORG: Department of Computer Design and Construction, Warsaw Polytechnic Institute (Katedra Budowy Maszyn Matematycznych Politechniki Warszawskiej)

TITLE: Analysis of the reliability of switching circuits

SOURCE: Archiwum elektrotechniki, v. 15, no. 3, 1966, 659-677

TOPIC TAGS: computer, computer switching, switching circuit, circuit reliability, information theory, binary multioutput circuit, component circuit, output letter, multivalent logical function

ABSTRACT: A new definition of computer switching-circuit reliability based on information theory concepts is proposed. The definition can be used to evaluate the reliability of binary multioutput circuits, circuits performing multivalent logical functions, and continuously operating circuits. The reliability of serial and parallel connections of two networks is defined, and simplified formulas are given which are valid for high component—circuit reliability. A comparison is

Card 1/2

UDC: 681.14-523.8.004:681.3.004.007

ACC NR: AP6036345

made between results arrived at by using the new and conventional definitions. It was found that results differed little in the case of equal probability output letters. Orig. art. has: 2 figures, 1 table, and 27 formulas. [Based on author's abstract]
[DR]

SUB CODE: 09/SUBM DATE: 02Feb65/SOV REF: 001/OTH REF: 004/

Card 2/2

BANKOWSKI, Marian

Interstitial pregnancy following operated on tubal pregnancy.
Ginek. Pol. 35 no.2:299-301 Mr-Apr '64.

1. Z Oddziału Położniczo-Ginekologicznego Szpitalu w Wależu
(Ordynator: lek. med. M. Bankowski).

BANKOWSKI, Marian

Modified bra in the prevention of mastitis in nursing mothers.
Ginek. Pol. 36 no.7:791-792 J1'65.

1. Z Oddziału Położniczo-Ginekologicznego Szpitala w Walczu
(Ordynator: lek. med. M. Bankowski).

BANKOWSKI, Marian

Intrauterine asphyxia due to excessive coiling of the umbilical cord. Pol. tyg. lek. 19 no.32:1248-1249 10 Ag '64.

1. Z Oddziału Położniczo-Ginekologicznego Szpitala w Walczu (ordynator: lek. med. M. Bankowski).

BANKOWSKI, Marian; MILCZAREK, Wieslaw; PLATEK, Stanislaw

Jaundice as a single symptom of late pregnancy toxemia
(gestosis). Pol. tyg. lek. 19 no.42:1618-1619 19 0 '64

1. Z Oddziału Położniczo-Ginekologicznego Szpitala w Walczu
(ordynator: lek. med. M. Bankowski).

MILCZAREK, Wiesław; BANKOWSKI, Marian

Uteroplacental apoplexy and the "Gestation ring". Ginek.
Pol. 35 no.6:873-875 N-D '62.

1. S. Oddziału Położniczo-Ginekologicznego Szpitala w Jajcu
(Ordynatora Lek. med. M. Bankowski).

BANKOWSKI, Marian

Incisions in obese patients, particularly in gynecological operations. Wlad. lek. 18 no. 23:1791-1794 1 D ' 65.

1. Z Oddzialu Polozniczo-Ginekologicznego Szpitala w Walczu (Ordynator: lek, med. M. Bankowski).

BANKOWSKI, Miroslaw; MIKINKA, Franciszek.

Pulmonary tuberculosis in aged. Gruzlica 23 no.4:271-276 Apr '55.

1. Z Terenowych i Centralnej Poradni Przeciwgruzliczej w
Lodzi Dyrektor: dr Jadwiga Szustrowa Lodzi ul. Jasna 36 b.
(TUBERCULOSIS, PULMONARY, in aged)

BANKOWSKI, Z,

BANKOWSKI, Z, Słownik chemiczny rosyjskiopolski. Pod red. Z. Bankowskiego. (Wyd. 1.)
Warszawa, Państwowe Wydawn. Techniczne, 1955. 1016 p. (Russian-Polish
chemical dictionary. 1st ed. bibl., footnotes, tables) Poland.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX	
BANKOWSKI, Z.		4	
<p>Electrochemical preparation of nitrogen pentoxide. J. Zawadzki and Z. Bankowski. <i>Roczniki Chem.</i> 22, 233-47(1948).—The electrolysis of a soln. of N_2O_5 in concd. HNO_3 at 0-25° (Pt anode) gave 80% oxidation of N_2O_5 to N_2O_5 (5 amp./dm², current efficiency of 35%, 0.5 kw.-hr./mole N_2O_5). The reaction proceeds according to the equation: $2 \text{NO}_3^- + 4 \text{H}^+ \rightarrow 2 \text{N}_2\text{O}_5 + 2 \text{H}_2\text{O}$. The liberation of O (probably from the decomn. of NO_3^- to N_2O_5 and NO_2, and from OH^-), and the reaction $4 \text{OH}^- + \text{N}_2\text{O}_5 \rightarrow 2 \text{NO}_3^- + 2 \text{H}_2\text{O} + 2 \text{e}^-$, are undesired side reactions. The polarization of the Pt anode increases with the lowering of the temp., and with an increase of the c.d., but in view of increasing thermal decomn. of N_2O_5 above 10° and diffusion of H_2O into the anode chamber, the electrolysis must be carried out at low temp. and with high c.d. The yield of N_2O_5 is not affected by the initial concn. of a few % H_2O if addnl. N_2O_5 is added. The current efficiency drops as the electrolysis proceeds; thus it is not desirable to prep. concd. N_2O_5 solns. The product contains H_2SO_4 which is removed by addn. of $\text{Ba}(\text{NO}_3)_2$. Besides Pt only a magnetite electrode showed promise, and the use of a.c. in addn. to d.c. deserves further study. H. H. Szmant</p>			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>FROM DOMINIV</p>			

BANKOWSKI, Z.

BANKOWSK, Z. principles of correct terminology of chemical compounds. Pt. 3. p. 227

Vol. 9, no. 7/8, July/Aug. 1956

CHEMIK

SCIENCE

Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, Feb. 1957

BANKOWSKI, Z.

BANKOWSKI, Z. Applying isotopes in the testing and control of technological chemical processes. p. 232

Vol. 9, no. 7/8, July/Aug. 1956

CHEMIK

SCIENCE

Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, Feb. 1957

BANKOWSKI, Z.,

"Polish Chemical Publications in Danger," Przemysl Chemiczny, No. 8, 1957, p. 433.

L 00914-67 EWP(j) RM

ACC NR: 116035458

(N)

SOURCE CODE: PG/0099/66/040/004/0587/0596

AUTHOR: Bankowska, Zofia of the Department of Organic Chemistry, Institute of Technology (Katedra Chemii Organicznej Politechniki), Warsaw; Laboratory No 4, Institute of Organic Synthesis, Polish Academy of Sciences (Pracownia Nr 4 Zakladu Syntezy Organicznej Polskiej Akademii Nauk), Warsaw.
"Enolization of Ethyl γ -Chloroacetoacetate as Compared with that of Ethyl Acetoacetate and Ethyl α -Chloroacetoacetate"

Warsaw, Roczniki Chemii, Vol 40, No 4, 1966, pp 587-596.

Abstract (Author's English abstract): The enol content of ethyl γ -chloroacetoacetate was determined bromometrically and the enol configuration was deduced from UV and IR spectra both in the ester and in its solution in various solvents. The positions of the OH bands (IR) in the chelated cis-enols of ethyl acetoacetate and both its monochloroderivatives were established by study of the deuterated compounds. The author thanks Professor, Doctor W. Polaczek, Director of Department of Organic Chemistry, for assistance and encouragement in the carrying out of this work; and also Master of Arts S. Kwiatkowska and Doctor U. Dabrowska, Institute of Organic Synthesis Polish Academy of Sciences, for carrying out the UV and IR spectra. Orig. art. has: 5 figures and 2 tables. [PRS: 36,862]

TOPIC TAGS: UV spectrum, IR spectrum, chelate compound, chlorinated organic compound

SUB CODE: 07 / SUBM DATE: 05 Nov 66 / ORIG REF: 002 / OTH REF: 008
Card 1/1hs

BANKOWSKI Z.

Excerpta Medica sec 16 3/3 Mar 55 Cancer

860. BANKOWSKI Z. Zakl. Anat. pat., Akad. med., Lublin. Kwasy nukleinowe w komórkach wątroby u myszy z przeszczepialnym miesakiem Crockera *Nucleic acids in the liver cells of mice with Crocker's sarcoma* Pol. Tyg. lek. 1954, 9/6 (161-165 and 43*) Illus. 6

Fifty white mice were inoculated with Crocker's sarcoma and the distribution of nucleic acids in the liver cells investigated histochemically. Between the 3rd and 6th day after implantation there were a very strong Feulgen reaction and a rather negative Brachet test for RNA, probably due to the acute inflammation which occurs at the site of implantation. Between the 6th and 9th day the reactions were similar to those in control animals. Beginning with the 12th day a steady increase of both acids was observed, the maximum being reached between the 24th and 27th day after implantation. According to the author's view the presence of the cells rich in nucleic acid as well as the simultaneous presence of the perishing ones poor in both acids might be considered as the sign of a functional disorder of the liver cells induced by the tumour disease. From the 30th day a decrease in the nucleic acids could be observed as a result of the commencing cirrhosis

Dux - Gliwice

EXCERPTA MEDICA Sec 16 Vol. 3/5 Cancer May 55

1724. BANKOWSKI Z. Zakl. anat. pat. A.M. Lublin. Glikogen w wątrobie myszy z przeszczepialnym miesakiem Crockera *The glycogen contents of the liver in mice with Crocker's sarcoma* Pol. Tyg. lek. 1954, 9/20 (609-612) Tables 1 Illus. 5

Using Bauer's histochemical method it was established that the glycogen content in the liver of white mice inoculated with Crocker's sarcoma is diminished as compared to that of control animals. Referring to previous investigations (see *Exc. Med., Cancer*, 1955, Abstr. No. 860, p. 187) it is suggested that the capacity of synthesis and storing of glycogen is dependent on the ribonucleic acid content of the cells.

Dux - Gliwice

ZZakładu Anatomii Patologicznej A. M. w Lublinie, Kierownik:
Prof. dr. Med. Stanisław Mahrburg.

~~BANKOWSKI, Zbigniew~~; MAJEWSKA, Zofia; RUSZCZEWSKI, Zygmunt;
SOKOLOWSKI, Stefan

Differentiation of parasitic disease from neoplasm of the
central nervous system. Neur. &c. polska 6 no.5:553-567
Sept-Oct 56.

1. Z Kliniki Chorob Nerwowych A.M. w Gdansk Kierownik: prof.
dr. med. Z. Majewska Z Oddzialu Neurochirurgii Wojskowego
Szpitala N. Z. Wojskowej Centralnej Pracowni Anatomii
Patologicznej i Medycyny Sadowej.

(BRAIN NEOPLASMS, differential diagnosis,
parasitic dis. (Pol))

(BRAIN, diseases,
parasitic, differ. diag. from tumor (Pol))

(PARASITIC DISEASES, differential diagnosis,
brain, from tumor (Pol))

BANKOWSKI, Z. EXCERPTA MEDICA Sec.16 Vol.4/8 Cancer Aug 56

2972. BAŃKOWSKI Z., PAWŁOWSKI L. and SZOZDA M. Zakł. anat. patol., A.M., 1956. O działaniu wyciągów z huby na wzrost roślin i miesaka Crockera u myszy *The influence of extracts of fungi on the growth of plants and of Crocker's sarcoma in mice* Patol. pol. 1956, 7/1 (23-28) Tables 3 Illus. 2

The effect of extracts of *Fomes fomentarius* L., *Polyporus betulinus* Bull., *Fomes igniarius* Fr. and *Poria obliqua* Bres., on the rate of growth of plants and time of survival of mice with transplantable Crocker's sarcoma was investigated. Aqueous extracts of *Poria obliqua* and *Polyporus betulinus* had an inhibiting effect on the growth of plants. Administration of decoctions and powders of *Poria obliqua* to mice with transplantable Crocker's sarcoma had no influence upon survival or weight of the tumours. The authors suppose that the inhibitory influence of the fungi on the growth of plants is due to some antimitotic substances in the aqueous extracts and decoctions.

Dux - Warsaw

BRUKOWSKI, Z.

The discovery of antiprotons. p. 25

CHM IK vol. 9, no. 1, Jan. 1956

Poland

so. EAST EUROPEAN ACCESSIONS LIST vol. 9, no. 10 Oct. 1956

LENKO, Jan; BANKOWSKI, Zbigniew

Case of mesothelioma of the epididymis and of the spermatic cord. Polski tygod. lek. 11 no.13:579-581 26 Mar 56.

1. Z oddziału urologicznego Wojskowego Szpitala Klinicznego i z Wojskowej Centralnej Pracowni Anatomii Patologicznej i Medycyny Sadowej. Lodz, Wojskowy Szpital Kliniczny.

(MESOTHELIOMA,
epididymis & spermatic cord (Pol))

(EPIDIDYMIS, neoplasms,
mesothelioma (Pol))

(SPERMATIC CORD, neoplasms,
mesothelioma (Pol))

BANKOWSKI, Zbigniew; WOŁODZKO, Leon.

**Capillary hemangioma of the placenta. Gyn. polska 28 no.2:
145-148 Mar-Apr 1956.**

**1. Wojskowa Centralna Pracownia Anatomii Patologicznej i
Medycyny Sadowej i Wojskowy Szpital Kliniczny, Oddział
Ginekologiczny w Łodzi. Z.B.: Łódź, ul. Gdańska 74 m. 9.
L.W.: Łódź, ul. Wiersbowa 34 m. 6.**

(PLACENTA, neoplasms

angioma, capillary (Pol))

(ANGIOMA

placenta, capillary hemangioma (Pol))

POLAND / General Problems of Pathology. Tumors.
Metabolism.

U

Abs Jour : Ref. Zhur - Biologiya, No. 3, 1959, 13559

Author : Bankowski, Z.; Vorbrodt, A.

Inst : -

Title : Effect of X-Rays Upon the Activity and Distribution of Phosphatases in Ehrlich's Edematous Carcinoma in Mice.

Orig Pub : Bull. Acad. polon. sci., 1957, cl. 2, 5, No. 7-8
245-249

Abstract : 10 days after the intraperitoneal transplantation of an Ehrlich's edematous carcinoma, only abdomen or the entire abdominal surface of a mouse was irradiated with 1700 r. Tapping was performed several times in the course of 24 hours. The

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POLAND / General Problems of Pathology. Tumors.
Metabolism.

U

Abs Jour : Ref. Zhur - Biologiya, No. 3, 1959, 13559

smears were dried over P_2O_5 , and alkaline (AP) and acid phosphatase (AP_1), 5-nucleotidase (I) and adenosinetriphosphatase (II) were determined histochemically. The topography and activity of enzymes are the same in the experiment and control. AP and I were absent before as well as after irradiation. AP_1 before irradiation was determined only in cytoplasm. 1-3 hours after irradiation, the activity of AP_1 increased and after 24 hours it disappeared from the cytoplasm but appeared in the nucleus and nucleolus. II before irradiation was more sharply expressed in the nucleus, less in cytoplasm. In a majority of cells, the intensity decreased in the nucleus

Card 2/3

POLAND / General Problems of Pathology. Tumors.
Metabolism.

U

Abs Jour : Ref. Zhur - Biologiya, No. 3, 1959, 13559

after irradiation but was preserved in the nucleolus. A part of the cells, according to the concentration of II in the experiment, did not differ from the nonirradiated ones; it is possible that they evaded the effect of the rays. After 24 hours, the majority of neoplastic elements degenerated and, in connection with this, the reaction to II in them disappeared. --
A. G. Andres

Card 3/3

25

POLAND/Human and Animal Physiology - (Normal and Pathological). T
Action of Physical Factors. Ionizing Radiation.

Abs Jour : Ref Zhur Biol., No 4, 1959, 18076

Author : Bankowski, Zbigniew; Vorbrodt, Andrzej

Inst : -

Title : The Influence of Local X-Ray Irradiation on the Distribution and Activity of Phosphatases in the Epidermis of Rat.

Orig Pub : Folia morphol., 1958, 9, No 1, 49-52

Abstract : The distribution of activity of basic phosphatase (I), 5-nucleotidase (II) acid phosphatase (III) and ATP (IV) was investigated. No changes of activity of I and II after irradiation were noted. The reaction to III was stable: in places weak, in places similar to the reaction of control animals. Activity of IV in the nuclei of basic layers of epidermis was decreased 3, 6, and 24 hours after irradiation. -- From the author's resume.

Card 1/1

Inst. Oncology, Odd. Gliwice Zakl. Biol.
Nowotworow
- 133 -

POLAND/Human and Animal Physiology - (Normal and Pathological). T
Action of Physical Factors. Ionizing Radiation.

Abs Jour : Ref Zhur Biol., No 4, 1959, 18074

Author : Bankowski , Zbigniew; Vorbrodt, Kraysztof

Inst : -

Title : Early Changes of the Histochemical Reaction of SH-Groups
and to S-S Connections in the Epidermis of Rats after
Irradiation.

Orig Pub : Folia morphol., 1958, 9, No 1, 57-61

Abstract : In the skin of rats immediately after irradiation with
2400 r, a clear decrease of the content of SH-groups
and an increase of connections S-S were noted. It is
assumed that under the influence of irradiation, SH-
groups turn out to be oxidized to the S-S connection.
-- From the Author's resume.

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- 132 -

POLAND/Human and Animal Physiology - (Normal and Pathological). T
Action of Physical Factors. Ionizing Radiation.

Abs Jour : Ref Zhur Biol., No 4, 1959, 18075

Author : Bankowski, Zbigniew

Inst :

Title : Further Investigations of the Influence of X-Rays on the
Content and Distribution of SH-Groups and S-S Connections
in the Epidermis of Mice.

Orig Pub : Folia morphol., 1958, 9, No 1, 63-68

Abstract : After local irradiation with 1600 r the content in
epidermis of SH-groups decreased and the amount of con-
nections S-S- increased. The maximum effect took place
3 hours after irradiation. -- From the author's resume.

Card 1/1

BANKOWSKI, Zbigniew; BICZOWA, Barbara; GORSKI, Michal; KRUS, Stefan;
LEWICKI, Zdzislaw; RUSZCZEWSKI, Zygmunt; STARZYNSKI, Stefan

Behavior of glycogen, fats and nucleic acids in the rat liver in acute
radiation sickness. Pat. pol. 13 no.3:325-336 '62.

1. Z Pracowni Patomorfologii Zakladu Patologii Doswiadczalnej PAN w
Warszawie. Kierownik: prof. dr med. L. Paszkiewicz. Kierownik pracowni:
doc. dr med. Z. Ruszczewski.

(RADIATION INJURY EXPERIMENTAL)
(LIVER) (NUCLEIC ACIDS)

(LIVER GLYCOGEN)
(LIPID METABOLISM)

BANKOWSKI, Zbigniew; BICZ, Włodzimierz; BICZOWA, Barbara.

Glycogen in the liver and glucose in the blood in radiation sickness in the rat. Pat. Pol. 16 no.3:291-295 J1-S ' 65.

1. Z Pracowni Patomorfologii (Kierownik Pracowni: doc. dr. Z. Bankowski); z Pracowni Biochemii (Kierownik: doc. dr. med. W. Bicz) i Zakład Patologii Doświadczalnej Polskiej Akademii Nauk w Warszawie (Kierownik: prof. dr. med. Z. Ruszczewski).

BANKS, W.A.

Modern development of the Black Clawson hydropulper. Papir
a celulosa 19 no. 1:26-28 Ja '64.

COMMON ELEMENTS										COMMON VARIABLE MOSES									
<p>BANKUL E-A</p> <p>ЕИДЕЛМАН (Ммо Z. M.) & BANKUL (E. A.). Влияние механического уменьшения листовой площади и разных условий питания на накопление сухого вещества у злаков. [Effect of the mechanical reduction of leaf area and of different nutritional conditions upon the accumulation of dry substance in cereals.] — <i>Bull. Plant Protection</i>, 3rd Ser.: <i>Control Measures and Implements</i>, Leningrad, part 3, pp. 113-130, 2 graphs, 1933. [English summary.]</p> <p>An account is given of open-air experiments on barley plants grown in pots with sterilized and carefully washed sand, to which various doses of nutrient elements were added, to determine the effect on the subsequent development of the plants of leaf injury of varying degrees of severity, as represented by the mechanical removal of a given percentage of the total leaf area [see preceding abstract]. It was found that at the culming stage the removal of 25, 50, or 100 per cent. of the leaves did not appreciably influence the onset of the development of the inflorescence, flowering, and earing, which depended to a much greater extent on the composition of the nutrient medium. The relative weights of the different vegetative organs also remained fairly constant with different doses of a complete fertilizer, no matter how extensive the lesion was, though of course the absolute weight varied with</p>										<p>ALB-3LA METALLOGICAL LITERATURE CLASSIFICATION</p>									

the severity of the lesion. This leads to the conclusion that soil fertilizers act on leaf-diseased plants in the same way as on healthy ones. Barley reacted to the severity of leaf lesions under the different nutritional conditions to a much less extent than spring wheat, and its yield was also less adversely affected; its root system suffered from the treatment even less than the over-ground parts. Phosphorus, as well as most of the other nutrients, appeared to have a stimulating effect on the photosynthetic energy, while with nitrogen the tendency was the reverse. Under all the nutritional conditions tested a reduction of up to one-half of the assimilating surface of the plants had a stimulating effect on the photosynthetic activity of the remaining portions of the leaves.

The work is considered to indicate that an analysis of the effect of the single factors concerned in the expression of pathological symptoms in plants (in the present case, the nature and varying doses of nutrients) may lead to an approximate understanding of the operation and influence of these factors on the yield of the plants in nature.

BANKUL, E. A.

EYDEL'MAN, Z. M., and BUNKUL, E. A. "Physiological Evaluation of Leaves of Different Ages and Stages of Development of a Given Plant," Trudy po Zashite Rastenii, Seriya 3, no. 3, 1933, pp. 131-146. 423.92 L54C.

So: SIRA S190-15, 15 Dec. 1953

BANKUTI, Laszlo

Experiences with processing yarns made of synthetic fibrous materials
in the Kobanya Textile Works. Magy. textil 13 no.2:69-72 F '61.

VARGHA, Geza, dr.; KERENYI, Imre, dr.; Technikai munkatársak:
BANKUTI, Mihályné dr.; ~~BANKUTI~~ Maria

Late functional effect of lung surgery. Tuberkulózis 16
no.4/5:112-117 Ap-My '63.

1. A MAV Tudogyogyintezet (igazgato: Nyiro Jozsef dr.) II
Belosztalyanak (foorvos: Vargha Geza dr.) es Tudosebeszeti
osztalyanak (foorvos: Kerenyi Imre dr.) kozlemenye.

(TUBERCULOSIS, PULMONARY)
(RESPIRATORY FUNCTION TESTS)
(PNEUMONECTOMY) (THORACOPLASTY)
(PNEUMOTHORAX, ARTIFICIAL)
(BRONCHOSPIROMETRY)
(PNEUMONOLYSIS)

VARGHA, Geza, dr.; BRUCKNER, Piroska, dr.; Technikai munkatársak: BANYAY, Maria; BANKUTI, Mihályne, dr.

Oxygen saturation of the arterial blood in tuberculous patients.
Tuberkulózis 15 no.3:69-73 Mr '62.

1. A MAV Tudogyogyintezet (igazgató: Nyíró József dr.) II Belosztályának
(először: Vargha Geza dr.) és Cardiorespiratorikus Laboratóriumának
közleménye.

(TUBERCULOSIS PULMONARY blood) (OXIMETRY)

BANKUTY, Jozsef

Dyeing of machine tools. Gepgyartastechn 1 no.1:18-22 Ap '61.

1. Csepel Vas- es Femmuvek.

BANKUZOV, A., gvardii general-mayor; BOLDYREV, N., polkovnik; PORTYANKO, D., polkovnik; KORMIL'TSEV, I., polkovnik; KUZNETSOV, A., polkovnik; VOLYKHIN, A., polkovnik; SHVIDCHENKO, K., polkovnik; PISAREV, G., polkovnik; NEYELOV, N., polkovnik; VERTELA, N., gvardii polkovnik; MURATOVA, A., polkovnik; NIKOLAYEV, A., polkovnik

We discuss projects of new Army regulations. Voen. vest. 38 no.7:2-9
Jl '58. (MIRA 11:6)

(Russia--Army--Regulations)

PEREPELITSA, Aleksandr Lavrovich; GUSEV, Nikolay Zakharovich;
BRUK, A.S., prof., doktor tekhn. nauk, otv. red.;
BANKVITSER, A.L., red.; POLENOVA, T.P., tekhn. red.
MAKAGONOVA, I.A., tekhn. red.

[Use of solid heat carriers in a flow sheet for the
continuous coking of Irkutsk Basin coals] Primenenie
tverdogo teploositel'ia v skheme nepreryvnogo kokso-
vaniia uglei Irkutskogo basseina. Moskva, Izd-vo Akad.
nauk SSSR, 1963. 143 p. (MIRA 16:4)
(Irkutsk Basin--Coal) (Coke ovens)

AL'TSHULER, Vitaliy Solomonovich; SECHENOV, Gennadiy Petrovich;
BANKVITSER, A.L., red.; RYLINA, Yu.V., tekhn. red.

[Fluidized bed processes under pressure] Protsessy v ki-
piashchem sloe pod davleniem. Moskva, Izd-vo AN SSSR,
1963. 213 p. (MIRA 16:12)
(Fluidization) (Gas manufacture)

SALTYKOV, N.I., prof., doktor tekhn. nauk, otv. red.; BANKVITSER,
A.L., red.; LAUT, V.G., tekhn. red.

[Heat and mass exchange in frozen layers of the earth's
crust] Teplo-i massobmen v merzlykh tolshchakh zemnoi kory.
Moskva, Izd-vo Akad. nauk SSSR, 1963. 213 p. (MIRA 16:5)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut merz-
lotovedeniya.

(Frozen ground)

KEBADZE, N.I.[deceased]; Prinimal uchastiye BULEISHVILI, D.A., kand.
geol.-miner. nauk; TAVADZE, F.N., otv. red.; RUBINSHTEYN,
M.M., kand. geol.-miner. nauk, red.; PEVZNER, G.Ye., red.;
KONDRAT'YEVA, V.I., red.; BANKVITSER, A.L., red.; ASTAF'YEVA,
G.A., tekhn. red.

[Natural resources of the Georgian S.S.R.] Prirodnye resursy
Gruzinskoy SSR. Moskva, Vol.5.[Fuel resources] Toplivnye
resursy. 1963. 271 p. (MIRA 16:8)

1. Akademiya nauk Gruzinskoy SSR. Tiflis. Sovet po izuche-
niyu proizvoditel'nykh sil.

(Georgia—Coal geology) (Georgia—Peat)

(Georgia—Petroleum geology)

DERYAGIN, B.V., otv. red.; ZAKHAVAYEVA, N.N., red.; MARTYNOV, G.A.,
red.; MOROZOVA, L.F., red.; STEFANOVICH, N.N., red.;
BANKVITSER, A.L., red.

[Studies in the field of surface forces] Issledovaniia v
oblasti poverkhnostnykh sil; sbornik dokladov. Moskva,
Nauka, 1964. 362 p. (MIRA 17:10)

1. Konferentsiya po poverkhnostnym silam, Institut fiziche-
skoy khimii Akademii nauk SSSR. 2d, 1962. 2. Chlen-korres-
pondent AN SSSR (for Deryagin).

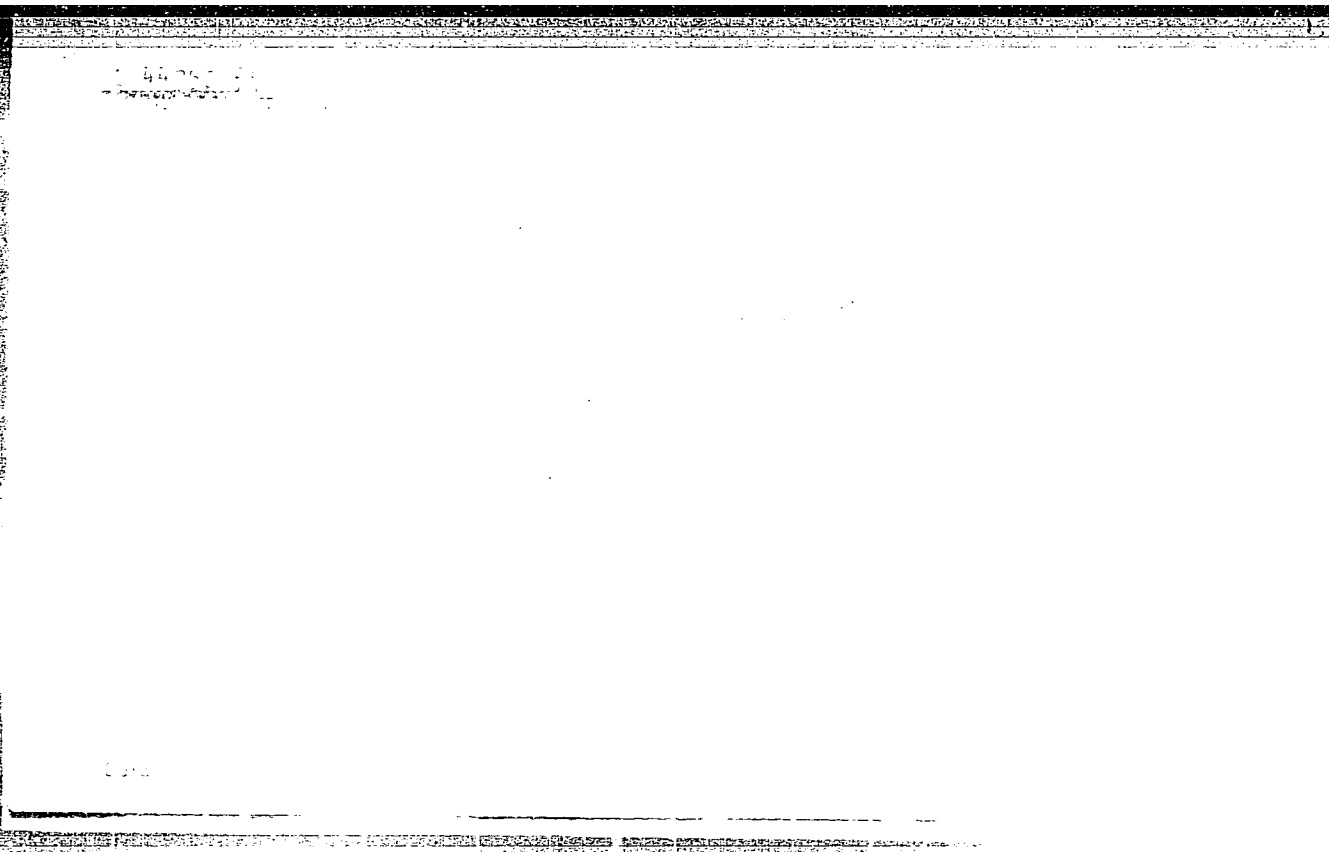
KANTOROVICH, B.V., doktor tekhn. nauk, prof., otv. red.;
BANKVITSER, A.L., red.; NIKOLAYEVA, I.N., red.

[New methods for fuel burning and problems of the theory
of combustion] Novye metody szhiganiia topliv i voprosy
teorii gorenii. Moskva, Nauka, 1965. 205 p.
(MIRA 18:12)

1. Akademiya nauk SSSR. Institut goryuchikh iskopayemykh.

"APPROVED FOR RELEASE: 06/09/2000

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ACCESSION NR: AP5015027

ACCESSION NR: AP5015027

KOMAR, Jozsef, dr.; BANKY, Ferenc, dr.

Bilateral tarsal tunnel syndrome. Orv. hetil. 106 no.9:421-422
28 F '65

1. Fovarosi Istvan Korhaz, Idegosztaly (foorvos: Lehoczky, Tibor,
dr.) es Budapesti Orvostudomanyi Egyetem, III. Sebeszeti Klinika
(tanszekvezeto: Stefanics, Janos, dr.).

BANLAKI, Istvan

The cooperation between the railroad car management and the transport companies is good. Kozleked kozl 19 no.3:33-34
20 Ja '63.

1. Kozponti Kocsiintezoseg vezetoje.

BANLAKI, Istvan, MAV fofelugyelo

Summer peak traffic on the Hungarian railroad lines. Kozleked
kozl 19 no.26:457-458 30 Je '63.

1. Kozponti Koosintezoseg vezetoje.

BANLAKI, Istvan

Efforts of the Railroad Car Management for satisfying the demands. Kozleked kozl 19 no.44:735 3 N '63.

1. Kozlekedes- es Postaugyi Miniszterium I. Vasuti Feosztalya
Kozponti Kocsiintezosegenek vezetoje.

BANLAKI, S.

(3)

Use of Michurinian methods in the cultivation of beet shoots and seeds. S. Banlaki and I. Dobrowsky (Növénytermelés, 1952. 1. 209-228). The applicability of the methods to seed production in beets proved very satisfactory. Effects of size and condition of shoots, planting time, time of sowing the seed crop, clipping, supplementary pollination, spraying with H_2BO_3 , and of covering shoots with mud before planting are discussed. A. STORFER.

BANLAKI, S

BANI AKI, S. The 200-quintal campaign for the production of sugar beets. p. 376

Vol. 8, No. 8, August 1956

AGRARTUDOMANY

AGRICULTURE

Budapest

SO: EAST EUROPEAN ACCESSIONS, Vol. 6, No. 3, March 1957

BANLAKI, S.

Developing bushes yielding beet seeds and having several stems. p. 7. (Magyar Mezogazdasag, Vol. 11, no. 6, Mar. 1956 Budapest)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

BANLAKI, S.

BANLAKI, S. The Sopronhorpacs Research Institute for Plant
Improvement and Plant Production is 25 years old. p. 23.

Vol. 115, No. 1, Jan. 1956
TERMEZET ES TARSADALOM
SCIENCE
Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

BANLAKI, S.

HUNGARY/Cultivated Plants - Technical, Oil, and
Sugar Plants.

M-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10919

Author : Banlaki, S., Dobrowszky, I.

Inst :

Title : The Results of Experiments Conducted in 1955 with the
Descendents of Beet Tubers Grown Without Bud Grafting III.

Orig Pub : Cukoripar, 1956, 9, No 1, 4.

Abstract : Experiments conducted in the subsidiary economy of the
Hatvan Sugar Factory have demonstrated that the quality
of the seed and the descendents of sugar beet (variety
Beta C. -242/53) from tubers grown without bud grafting
are often better than that of tubers grown with bud
grafting.

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26

BANLANOVSKAYA, V.F. (Moskva)

Study of the method of difference in solving the first boundary value problem for equations of the type of nonsteady percolation equations; two-dimensional case. Zhur. vych. mat. fiz. 4 no.4 (suppl.):228-243 '64. (MIRA 18:2)

JOST, F.; TOMANOVA, D.; BANNER-VOIGT, A.

Catalytic dealkylation of alkyl aromatic compounds Pt.8.
Coll Cz chem 29 no.7:1626-1632 J1 '64.

1. Institut für theoretische Grundlagen der chemischen
Technik, Tschechoslowawische Akademie der Wissenschaften,
Prague.

BANNIK, A. P.

BANNIK, A. P.: "Investigation of the contact between tractor engines and the ground" (Steel wheels with lugs). Moscow, 1955. Min Higher Education USSR. Moscow Automotive Mechanics Inst. (Dissertation for the Degree of Candidate of TECHNICAL Sciences)

SO: Knizhnaya Letopis' No. 51, 10 December 1955

BANNIK, A.P., kand.tekhn.nauk; SAMILKIN, V.D., kand.tekhn.nauk

Efficiency of ~~the~~ coefficient driving wheels of tractors.
Mekh. i elek. sots. sel'khoz. 19 no.4:48-49 '61.

(MIRA 14:11)

1. Podmoskovnaya ispytatel'nyy stantsiya Nauchno-issledovatel'skogo
i Moskovskiy avtomekhanicheskiy institut.
(Tractors---Wheels)

Dannik, B. P.

V 1073

PHOTOFISSION OF URANIUM NUCLEI WITH THE EMISSION OF THE LIGHT LONG-RANGE PARTICLE. B. P. Dannik and Yu. S. Ivanov (Lebedev Physics Inst.). Doklady Akad. Nauk S.S.S.R. 303, 89/-9 (1955) Aug. 21. (In Russian)

Nuclear emulsions were used to observe the fission of uranium nuclei effected by photons of high energies 80 and 150 to 250 Mev. Experiments with energies over 150 Mev indicated an escape of a third light, charged, long-range particle which the authors named "triple fission." A table of triple fission frequency with energies of 150 to 250 Mev is given. As the process of triple fission in uranium with high energies $E_\gamma > 150$ Mev the authors consider as follows: in the uranium nucleus a photon creates a meson (π^+ , π^- , or π^0) which is absorbed by inner nucleons of the nucleus, and as a result of absorption a small tightly bound group of nucleons (or possibly one separate nucleon) obtain sufficient energy to escape out of the nucleus as a separate particle. Angular distribution of the triple fission long-range particles is given in support of the theory. (R.V.J.)

(1)

BANNIK, B. P., KULIKOVA, N. M., LAZAREVA, L. E. and YAKOVLEV, V. A.

"The Angular Distribution of Fission Fragments in the Photo Fission of Uranium"
a paper presented at the International Conference on Nuclear Reactions, Amsterdam,
2-7 July 1956.

D551274

Bannik, B. P.

20-6-12/42

AUTHORS: Bannik, B. P., Kopylova, D. K., Nomofilov, A.A.;

TITLE: Capture of a K^- -Meson With Emission of $\Lambda^5\text{He}_2$ (Zakhvat K^- -mezona s ispuskaniyem $\Lambda^5\text{He}_2$)

PERIODICAL: Doklady AN SSSR, 1957, Vol.116, Nr 6, pp. 939-942 (USSR)

ABSTRACT: The capture of a K^- -meson with subsequent emission of a $\Lambda^5\text{He}_2$ hyper-fragment was found in a stack of photoemulsions irradiated in great height. This capture is illustrated in a sketch. The particle entered the stack from outside, passed over a distance of 27,3 mm in the emulsion and subsequently stopped by producing a σ -star. Both from the range and the scattering of the particle $m = (823 \pm 160) m_e$ was found for the mass of the particle and from the ionization measurements resulted $m \approx 700 m_e$. Apparently a K^- -meson is concerned. A black trace of this star ends with a further star from which a pion is emitted. The second star occurred apparently with the decay of the stopped hyper-fragment into three charged particles. Each of these particles has the charge $Z \leq 2$. The scheme of decay of this star has the form $\Lambda^5\text{He}_2 \rightarrow \text{He}_2^4 + p + \pi$. The kinetic energy of the decay products amounts to $Q_k = (34,2 \pm 0,4) \text{ MeV}$. The total of the momenta of the formed particles $p = (13 \pm 26) \text{ MeV/c}$. With this decay also a neutron with very little energy could be emitted. In this case the scheme of decay would be as follows: $\Lambda^6\text{He}_2 \rightarrow \text{He}_2^4 + p + n +$

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Capture of a K^- Meson With Emission of ΛH_2^5 .

20-6-12/42

+ π^- . The subsequently discussed cinematic analysis of the primary star allows a more precise identification of the hyper-fragment. F. In this case all possible combinations from 2,3,4 and 5 particles of the primary star are taken into consideration. It is not impossible that the hyperfragment can sometimes be formed in excited state and then by emission of a γ -quantum passes over into the ground state. In the concrete case investigated here, two combinations of particles are possible for which the binding energy B assumes none-negative values: 1st combination: ΛH_2^5 and p occurred with the decay of the excited hyperfragment ΛLi_3^{*6} . The binding energy amounts to $B_{\Lambda}^* = (2,2 \pm 0,7)$ MeV. The energy of the proton amounts to $E_p = (10,6 \pm 0,2)$ MeV in the center-of-gravity system. 2nd combination: ΛH_2^5 and n were formed with the decay of the excited hyper-fragment ΛLi_3^{*6} . The binding energy amounts to $B_{\Lambda}^* = (-0,9 \pm 2,0)$ MeV. The energy of the neutron in the center-of-gravity system amounts to $E_n = (9,9 \pm 1,1)$ MeV. There are 1 figure, 1 table, and 4 non-Slavic references.

ASSOCIATION: ^{United} Institute of Nuclear Research (Ob'yedinennyy institut yadernykh
PRESENTED: June 1, 1957, by N.N. Bogolyubov, Academician issledovaniy)
SUBMITTED: May 25, 1957
AVAILABLE: Library of Congress
Card 2/2

BANNIK, B. P.

AUTHOR BANNIK, B. P., KULIKOVA, N. M., LAZAREVA, L. Ye., YAKOVLEV, V. A. 56-7-8/66
 TITLE Angular Distribution of Photofission Fragments from Uranium.
 (Uglovoye raspredeleniye oskolkov pri fotodelenii urana - Russian)
 PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 33, Nr 7, pp 53-55 (U.S.S.R.)

ABSTRACT With the help of Ilford D-1 plates saturated with uranium the angular distribution of the fission fragments are determined on the occasion of the fissioning of uranium by a γ bombardment with an energy of 9,4, 12, and 26,5 MeV. The 30 MeV synchrotron of the FIAN served as a γ source.

Anisotropy increases very considerably with decreasing γ -energy. For the 3 coefficients, a, b, c, of the function of angular distribution the following values were determined:

E_{γ}^{max}	b/a	ratio between the anisotropic and isotropic fission yields
9,4	$0,55 \pm 0,09$	$0,55 \pm 0,09$ 1)
12	$0,20 \pm 0,07$	$0,13 \pm 0,05$
26,4	$0,07 \pm 0,06$	$0,05 \pm 0,04$

1) $(\frac{2}{3} \cdot \frac{b}{a} + \frac{2}{15} \cdot \frac{c}{a})$ (2 tables, 1 ill., 3 Slavic references).

ASSOCIATION Physical Institute "P.N. Lebedev" of the Academy of Sciences of the USSR
 (Fizicheskii institut im. P.N. Lebedeva Akademii nauk SSSR)

SUBMITTED 7.2.1957

AVAILABLE Library of Congress.

Card 1/1

BANNIK, B. P.

AUTHORS: Bannik, B. P., Gulyamov, U. G., Kopylova, D. K., 56-2-3/51
Nomofilov, A. A., Podgoretskiy, M. I., Rakhimbayev,
B. G., Usmanova, M.

TITLE: Hyperfragments in Nuclear Emulsions (Giperfragmenty v
yadernnykh emul'siyakh)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958,
Vol 34, Nr 2, pp 286-297 (USSR)

ABSTRACT: The present work investigates the properties and the relative
frequency of the production of hyperfragments in two
emulsion chambers, which are exposed to cosmic irradiation
in the stratosphere. One of the chambers consisted of 600 μ
thick emulsion layers of the Ilford type (Il'ford) G-5 and
had been irradiated during the international expedition in
the Po plains, the second chamber consisted of БМКФ layers
of the P type (thickness 400 μ) and was irradiated in the
Soviet Union. In this investigation shortly discussed here
6 π^- -mesons, 1 π^+ -meson, 1 Λ^0 -particle, 4 K^- -mesons, 1 Σ^- -hyperon
and 5 hyperfragments (of which 5 decayed with the emission
of one pion) were found. Not one decay of a Σ^+ -hyperon or
of a K^+ -meson was found, because the method used for

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Hyperfragments in Nuclear Emulsions

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investigating the emulsion layers excluded the determination of such particles. In all cases the traces of secondary pions were coplanar within $2-3^\circ$. The decay of a particle with the mass $(860 \pm 50)m_e$ is shown by means of a diagram; this is obviously the decay $\tilde{J}^1 \rightarrow \pi^+ + \pi^0 + \pi^0$ with the subsequent decay $\pi^0 \rightarrow \gamma + e^+ + e^-$. The mass of the K^- -meson was determined from the multiple scattering as well as from the remaining range and amounted to $(1100 \pm 250)m_e$. One of the particles developing in the five-membered star causes a small secondary destruction. With all possible variants of nuclear capture the total energy output is considerably greater than $m_{\pi^0}c^2$. The same applies to two of the three other σ_K -stars, too. Obviously all σ_K -stars found here developed in capturing K^- -mesons in the light nuclei of the emulsion. In the present work 10 hyperfragments were found which correspond to the criteria suggested by A. Filipkovskiy et al. (ref. 7). (Of these 10 hyperfragments five ended by mesonless decay, the remaining 5 by mesonic decay). For these processes decay the following decay schemes are proposed: $\Lambda He_2^2 \rightarrow He_2^4 + p + \pi^-$, $\Lambda He_2^5 \rightarrow He_2^2 + p + \pi^-$, $\Lambda He_2^5 \rightarrow He_2^5 + p + \pi^-$, $\Lambda H_1^4 \rightarrow He_2^4 + \pi^-$, $\Lambda Li_3^7 \rightarrow He_2^4 + 2p +$

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Hyperfragments in Nuclear Emulsions

56-2-3/51

+ n + π^- . There are 4 figures, 3 tables, and 17 references, 5 of which are Slavic.

ASSOCIATION: United Institute for Nuclear Research (Ob'yedinennyy institut yadernykh issledovaniy) **Tashkent Physico-technical Institute** (Tashkentskiy fiziko-tekhnicheskiy institut)

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

1. Nuclear emulsions-Hyperfragments determination

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21(8)

SOV/56-35-5-50/56

AUTHORS: Bannik, B. P., Bunyatov, S. A.

TITLE: The Hyperfragments From σ_K -Stars (Giperfragmenty iz σ_K -zvezd)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1307-1308 (USSR)

ABSTRACT: In the course of a systematical investigation of a stack of photoemulsions irradiated by a beam of K^- -mesons 4 cases of a meson decay of hyperfragments were found in 619 σ_K -stars. Three of these cases were identified. The data concerning the traces of hyperfragments and the traces of particles emitted in their decay are shown in a table. Case 1: The hyperfragment was emitted from a star of the type $2 + 0 K^-$ and decayed "during flight" into 2 charged particles. The traces of the hyperfragments and secondary particles are co-planar. The kinematics of the decay and the results obtained by measurements admit only the two decay schemes $\Lambda^4 \rightarrow He^4 + \pi^-$ (a), $\Lambda^3 \rightarrow He^3 + \pi^-$. Case 2: The hyperfragment was emitted from a star of the type $4 + 1K^-$ and, when decaying, produced a three-beam star, the beams of which are co-planar. This decay developed in accordance with the scheme

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The Hyperfragments From σ_K -Stars

SOV/56-35-5-50/56

$\Lambda \text{He}^5 \rightarrow \text{He}^4 + p + \pi^-$. The binding energy B_Λ of the Λ^0 -particle was (1.8 ± 0.7) MeV. Case 3: The hyperfragment was emitted from a star of the type $5 + 0 K^-$ and, when decaying, it formed a two-beam star. The development of a scattering process at the end of the trace indicates that decay took place only after the particle had been stopped. In this case the decay scheme was $\Lambda \text{H}^4 \rightarrow \text{He}^3 + \pi^- + n$, and the binding energy amounts to $B_\Lambda = (0.6 \pm 0.6)$ MeV. The manner in which calculations were carried out is described in short. Finally, additional possibilities of identifying the meson-less decay of hyperfragments are discussed. The authors thank Z. P. Golovina and G. S. Malyshkina for carrying out measurements. There are 1 table and 6 references, 2 of which are Soviet.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: July 26, 1958

Card 2/2

24.6200,24.6510,
24.6520,24.6900

76971
SOV/56-37-6-11/55

AUTHORS: ~~Bannik, B. P.~~, Grishin, V. G., Danysh, M. Ya.,
Lyubimov, V. B., Podgoretskiy, M. I.

TITLE: Elastic Scattering of 8.7 bev Protons on Photographic
Emulsion Nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki,
1959, Vol 37, Nr 6, pp 1575-1582 (USSR)

ABSTRACT: A study was made of the elastic scattering of the
8.7 bev protons on photographic nuclear emulsions
(type NIKFI-R, 450 μ thick). The intensity of the
irradiation was approximately 10^4 particles/cm².
The proton beam passed along the chamber at a 0.7°
angle to the plane of the emulsion layer. The dis-
tribution and measurement of tracks was done optically
under 60 x 10 x 1.5 magnification. The selection of
pairs was done according to the following conditions:
(1) relativistic ionization; (2) projection of the
angle formed by the track with the beam axis at angle
Card 1/5 <2°; (3) distance between tracks not less than

Elastic Scattering of 8.7 bev Protons
on Photographic Emulsion Nuclei

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50-60 μ in the emulsion plane and 25-30 μ in the depth; and (4) visual absence of an inclination of the track toward emulsion layer. This method yielded 601 pairs of tracks at a 95-mm distance from the edge of the emulsion. The angular distribution of tracks is plotted in Fig. 1. The mean square root error involved in measuring the angular distribution was $\Delta \theta = 0.03^\circ$. In a similar way was measured the angular distribution of 572 pairs at $R = 5$ mm. The differential and the total cross section of elastic scattering, $(d\sigma/d\Omega)_d$ and σ_d respectively, were calculated on the basis

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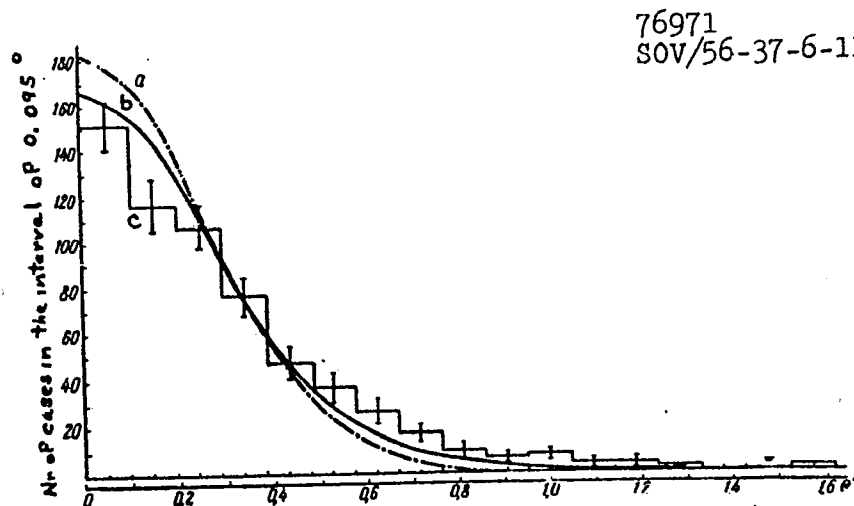


Fig. 1. The angular distribution at the distance $R = 95$ mm from the edge of emulsion chamber. (a) Calculated angular distribution compensated for the initial angular distribution at $R = 5$ mm and for multiple coulomb scattering; (b) calculated angular distribution compensated for the initial angular distribution, for the multiple coulomb scattering at $k_1 = 0$; (c) measured angular distribution.

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Elastic Scattering of 8.7 bev Protons
on Photographic Emulsion Nuclei

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of the optical model of J. W. Cronin, R. Coll, and
A. Abashian (cf. Phys. Rev., 107, 1121, 1957):

$$\left(\frac{d\sigma}{d\Omega}\right)_d = \left| k_0 \int_0^\infty (1 - \exp\{-i\bar{\sigma}_{p_0} S(b)\}) J_0(k_0 b \sin \theta) b db \right|^2$$

$$\sigma_d = 2\pi \int_0^\infty (1 - \exp\{-i\bar{\sigma}_{p_0} S(b)\})^2 b db.$$

The analysis showed a good accord between the experi-
mental data and the optical model, if compensation
is made for refraction in the nucleus. The work was
carried out under the guidance of I. M. Gramenitskiy;
P. K. Markov and E. N. Tsygankov participated in the
discussion of this work; calculations and measure-
ments were done by V. M. Gorbunkov, A. I. Radionov,
L. I. Aver'yanova, Z. P. Golovina, T. A. Zhuravleva,
N. V. Kirsanova, M. P. Koteneva, A. I. Maklachkova,
G. A. Nurusheva, and G. P. Tyupikova. The text con-
tains 2 tables; 4 graphs; and 12 references, 6 Soviet,
1 U.K., 5 U.S. The 5 most recent U.S. and U.K. ref-
erences are: 1958 Ann. Intern. Conf. on High Energy

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Elastic Scattering of 8.7 bev Protons
on Photographic Emulsion Nuclei

76971
SOV/56-37-6-11/55

Physics at CERN, Geneve, p 309; J. W. Cronin, R. Cool,
A. Abashian, Phys. Rev. Nr 7, 1121, 1957; I. H. Atkinson,
W. H. Hess, V. Perez-Mendez, R. W. Wallace. Phys. Rev.
Lett., 2, 168, 1959; N. E. Booth, Mr. B. Ledley,
D. Walker, D. H. White, Proc. Phys. Soc. A70 209, 1957;
F. F. Chen, C. P. Leavitt, A. M. Shapiro, Phys. Rev.
99,857, 1955.

ASSOCIATION: Joint Inst. Nuclear Research, USSR (Ob'edinenyy institut
yadernykh issledovaniy, SSSR)

SUBMITTED: June 9, 1959

Card 5/5

BANNIK, B.P.

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S/120/60/000/03/009/055
E032/E514

21.5200

AUTHORS: Bannik, B.P. and Podgoretskiy, M.I.

TITLE: A Method of Rapid Scanning of Photo-emulsions Along
Tracks *19*

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, No 3, pp 36-37

ABSTRACT: NIKFI-R nuclear emulsions 450 μ thick were irradiated with 9 BeV protons in a beam having an intensity of 10^4 particles per cm^2 . The angular divergence of the beam was 0.1° in the plane of the emulsion, and 0.2° in the plane perpendicular to the emulsion. The angle between the beam and the plane of the emulsion was 0.4° . 2 mm sections of minimum ionisation tracks found in the lower half of the emulsion were successively inspected under a microscope. A rate of 3.5 m/day was achieved. A single observer working at the rate of 5 hours per day for 6 days inspected 1005 tracks having a total length of 2094 cm. In this way 62 stars and 32 single scatters were found. The inelastic interaction length was found

Card 1/2 to be 33.8 ± 4.3 cm. Acknowledgment is made to

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E032/E514

A Method of Rapid Scanning of Photo-emulsions Along Tracks

M. Ya. Danysh, I. M. Gramenitskiy and G.A.Nurusheva
for help in the present work.
There is 1 Soviet reference.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Studies)

SUBMITTED: April 17, 1959

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BANNIK, B. P.

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B006/B070

24.6520

AUTHORS: Bannik, B. P., Grishin, V. G.

TITLE: Interference Between Coulomb and Nuclear Scattering at High Energies *19* ✓

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 1 (7), pp. 94-96

TEXT: The amplitude of elastic scattering of nucleons on nucleons and nuclei can in general be described by $f(\vartheta) = A(\vartheta) + (B\vec{\sigma}_1, \vec{\vartheta})$, the first term denoting a complex function and the second the part of the amplitude depending on the spins of the interacting particles. In quasi-classical approximation, the spin-free part of the scattering amplitude

may be written as $A(\vartheta) = ik \int_0^\infty [1 - e^{2i\beta(\varrho)}] J_0(k\varrho\vartheta) \varrho d\varrho$ where the phase

$\beta(\varrho)$ is equal to the sum of the Coulomb and nuclear scattering phases. Using the last expression the authors have calculated the interference

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Interference Between Coulomb and Nuclear
Scattering at High Energies

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between the Coulomb and nuclear scatterings of 8.7 Bev protons for light and heavy (Ag, Br) photoemulsion nuclei. The nuclear scattering phases are calculated in the usual manner and the Coulomb scattering phase according to a formula of Bethe. The Coulomb interference is determined by the magnitude and sign of the nuclear phase. In the optical approximation, the latter depends on the magnitude and sign of the real part of the amplitude of the nucleon-nucleon forward scattering $\text{Re } f_{NN}(0)$. ✓

$\text{Re } f_{NN}(0)$ was determined by P. N. Markov, E. N. Tsyanov, M. G.

Shafranov and Shakhbazyan to be $14.4 \cdot 10^{-13}$ cm. The results of this calculation (angular distribution of the scattering cross section) are shown in Fig. 1. Later, the differential scattering cross section is calculated according to a formula of Bethe, given in Ref. 3, the form

factor being taken as $F = \exp\{-(ka)^2/4\}$. Fig. 2 shows the values obtained for the angular distribution of the differential scattering cross section for hydrogen. In the calculation it was assumed that the influence of spins is negligible. For a the value $0.86 \cdot 10^{-13}$ cm and for

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Interference Between Coulomb and Nuclear Scat-
tering at High Energies

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Re $f_{NN}(0)$ the value $13.5 \cdot 10^{-13}$ cm have been taken. The experimental values are from a work of P. K. Markov. In conclusion, the authors thank I. I. Levintov, M. I. Podgoretskiy and Ya. A. Smorodinskiy for valuable discussion. There are 2 figures and 5 references: 3 Soviet, 1 American, and 1 British. ✓

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint
Institute of Nuclear Research)

SUBMITTED: December 28, 1959 (initially) and April 7, 1960 (after
revision)

Card 3/3

BANNIK, B.P.; GALPER, A.M.; GRISHIN, V.G.; KOTENKO, L.P.; KUZIN, L.A.;
KUZNETSOV, Ye.P.; MERSON, G.I.; PODGORETSKIY, M.I.; SIL'VESTROV,
L.V.

Elastic scattering of 2.8 and 6.8 BeV/c negative pions on carbon.
Dubna, Izdatel'skiy otdel Ob"edinennogo in-ta iadernykh issledova-
nii, 1961. 20 p.

(No subject heading)

BANNIK, B.P.; GRISHIN, V.G.; SIL'VESTROV, L.V.

Elastic scattering of 8.7 Bev. protons on photographic emulsion nuclei. Zhur. eksp. i teor. fiz. 40 no.6:1653-1657 Je '61.
(MIRA 14:8)

1. Ob'yedinennyy institut yadernykh issledovaniy.
(Photography, Particle track)
(Protons—Scattering)

BANNIK, B.P.; GAL'PER, A.M.; GRISHIN, V.G.; KOTENKO, L.P.; KUZIN, L.A.;
KUZNETSOV, Ye.P.; MERZON, G.I.; PODGORETSKIY, M.I.; SIL'VESTROV, L.V.

Elastic scattering of 2.8 and 6.8 Bev./c π^+ -mesons on carbon.
Zhur. eksp. i teor. fiz. 41 no.5:1394-1401 N '61. (MIRA 14:12)

1. Ob"yedinennyy institut yadernykh issledovaniy i Fizicheskiy
institut imeni P.N. Lebedeva AN SSSR.
(Mesons—Scattering) (Carbon)

BANNIK, B.P.; VISHKI, T.; DO IN SEB;

[A criterion of the separation of p-p interactions in nuclear emulsions] Ob odnom iz kriteriev otbora p-p - vzaimodeistvii v iadernykh emul'siakh. Dubna, Ob"edinen-ryi in-t iadernykh issl., 1963. 5 p. (MIRA 17:7)

AZIMOV, S.A.; ~~BANNIK, B.P.~~; VISHKI, T.; GULYAMOV, U.G.; DO IN SEB; RAKHIMBAYEV, B.G.; CHERNOVA, L.I.

Inelastic pp-interactions with low transfer of momentum. IAd. fiz.
1 no.4:676-680 Ap '65. (MIRA 18:5)

1. Ob'yedinennyy institut yadernykh issledovaniy. 2. Sotrudniki
Instituta yadernoy fiziki AN Uzbekskoy SSR (for Azimov, Gulyamov,
Rakhimbayev, Chernova).

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ACC NR: AP6014820

SOURCE CODE: UR/0367/65/001/004/0676/0680

AUTHOR: Azimov, S. A.; Bannik, B. P.; Vishki, T.; Seb, Do In; Gulyamov, U. G.;
Rakhimbayev, B. G.; Chernova, L. I. B 37

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TITLE: Inelastic pp-interactions with low momentum transfer

SOURCE: Yadernaya fizika, v. 1, no. 4, 1965, 676-680

TOPIC TAGS: inelastic interaction, nuclear emulsion, proton, isobar

ABSTRACT: The nuclear emulsion method is used to study inelastic pp--interactions for energies of 2.26 and 9 GEV of a primary proton. The search for events in the emulsion was performed by accelerated inspection of traces. Energy distributions were obtained for slow protons. The events selected are of two types: pp-interactions and a small number of interactions connected with secondary processes in the nucleus. For the energy distribution all cases were taken with their weights $K = 1/W$, where W is the probability of registration. Both distributions were normalized for the complete observed path of primary protons $R = 3694m$. In the processing of the experimental data the relative output of the reaction was evaluated qualitatively with the formation of one or two isobars. The authors thank Van Shu-fen', T. Vishki, I. M. Gramenitskiy, V. G.

Grishin, N. Dalkhazbav, R. M., Lebedev, A. A. Nomofilov, M. I. Podgoretskiy,

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UVR

BANNIK, B.P.; VISHKI, T.; DO IN SEB

One of the selection criteria of pp-interactions in nuclear emulsions. Prib. i tekhn. eksp. 9 no.5:70-72 S-U '64.

(MIRA 17:12)

1. Ob'yedinennyy institut yadernykh issledovaniy.

SOLDAK, A.G. [Soldak, A.H.]; BANNIK, G.I. [Bannyk, H.I.]

Data on the water potential of upper Cretaceous sediments in the
southeastern Donets Basin, Nauk.zap.Kyiv.un. 16 no.14:219-222
'57. (MIRA 13:4)

(Donets Basin--Water, Underground)